

Appl. No.: 10/699,008  
Response Dated: 12/8/05  
Reply to Office Action of: 09/21/2005

### **REMARKS/ARGUMENTS**

Claims 11-13 remain in this application. Claims 1-10 have been withdrawn in response to the previous restriction requirement.

#### **1. Claim Rejections Under 35 USC §102**

Claims 11 and 12 are finally rejected under 35 USC 102(b) as being anticipated by Brundage (US Patent 5,223,188).

Respectfully, the rejection is traversed. This is a classic case of claiming a narrow range within a broader range disclosed in the prior art. Thus, it is not a proper 102(b) rejection, as nowhere in Brundage is the claimed range specified.

The precedent makes clear that in such cases where a prior art reference discloses a range encompassing a narrower claimed range, the prior art is sufficient only to establish a prima facie case of obviousness (not 102(b)). That is not to say that the claimed invention having a narrower range is unpatentable. Rather, the existence of overlapping or encompassing ranges shifts the burden to the Applicant to show that his invention would not have been obvious.

Accordingly, an Applicant may rebut the prima facie case of obviousness by establishing "that the claimed range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Geisler, 116 F.3d at 1469-70, 43 USPQ2d at 1365.

In the instant case, Brundage '188 teaches exposing the material to electromagnetic radiation or energy within the frequency range of  $10^7$  to  $10^{13}$  Hz (RF or Radio Frequency). This range equates to 10 MHz to 10,000 GHz. Applicants have discovered that operating within a very small sub-range within that broader range, i.e., within the narrower microwave range of 100 MHz to 30 GHz provides significant unexpected advantages. For example, operating in this range allows the wet ceramic body to be stiffened without any significant loss in water. In particular, this frequency range has the advantage that energy can be more easily controlled and coupled to the ware as compared to conventional RF drying, thereby allowing the ware temperature to be controlled to just above the gel point. This has a significant effect on reducing the propensity for cracking. Accordingly, since operating in the claimed range brings about unexpected results and a marked improvement, the claims including the narrower range are patentable.

Claim 13 has been previously added. Claim 13 is allowable for at least the reasons given for claim 11 and for the additional reason that it was discovered that these specific modes couple very efficiently to the wet ceramic body.

#### **2. Conclusion**

Based upon the above amendments, remarks, and papers of records, Applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Reply timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or

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surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,



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